AR201-12549b8

ROBUST SUMMARY
ALKYL SULFIDE CATETGORY
CAS # 68511-50-2
ECOTOXICITY ELEMENTS: ACUTE TOXICITY TO FISH

Test Substance	
CAS #	68511-50-2
Chemical Name	1-propene, 2-methyl-, sulfurized
Remarks	This substance is referred to as methyl propene derivative in the HERTG's Test Plan for Alkyl Sulfide Category. For more information on the chemical, see Section 2.0 "Chemical Description of Alkyl Sulfide Category" in HERTG's Test Plan for Alkyl Sulfide Category.
Method	
Method/Guideline followed	Test protocol followed OECD Guideline for Testing of Chemicals #203, Fish Acute Toxicity Test (1984).
Test Type	WSF static renewal test; a one level screening test
GLP (Y/N)	Y
Year (Study Performed)	1986
Species/Strain	Sheepshead minnow (*Cyprinodon variegatus*)
Analytical Monitoring	Total organic carbon (TOC) measurements of each freshly prepared test solution and control and after 24-h on test just before daily renewal with fresh test solution.
Exposure Period (unit)	96 hours
Statistical methods	Statistical analysis of survival data not warranted.
Remarks field for test conditions (fill as applicable)	Test Organisms: source – a commercial supplier in New Hampshire, age – 24 to 29 days old, total length – 20.3 mm average (range 13 to 30 mm; n =18), wet weight – 0.16 g average (range 0.03 to 0.039 g; n = 18). Loading - 0.32 g biomass/L, Pretreatment – none, fish held for a minimum of 20 days before testing. No feeding during the test. Test System: Individual WSFs were prepared for each daily renewal of the 10,000 mg/L test level. A measured weight of test material was added to a measured volume of dilution water (15-L) in a glass vessel and stirred for 16 to 24 hours. Stirring accomplished using a Telfon coated magnetic stir bar. Mixing speed adjusted such that a vortex formed between 30 to 50% of the distance to the bottom. Following the mixing period, the test solutions were allowed to stand for 2 hours before the water phase was removed. To avoid removing test material from the surface or bottom, a siphon was placed in the mixing vessel prior to addition of water and test substance with the lower end approximately midway between bottom and surface. The siphoned water phase, designated water soluble fraction (WSF), was used for the aquatic toxicity test. About 90% of the test solution in each test vessel was renewed daily after 24, 48, and 72 hours. Two 5-L replicates per treatment, 10 fish per replicate (20 per treatment). Test vessels were loosely covered to reduce entry of dust, etc. Dilution Water: Natural seawater collected from Cape Cod Canal,

	Bourne, Massachusetts which derives water from Buzzards Bay or Massachusetts Bay. The water was filtered through 0.5-micron polypropylene core filter and activated carbon, then stored for 1 to 4 days prior to use while being constantly aerated. During storage the water had a salinity of 32 to 33 ppt and pH of 7.7 to 7.8. During the test: dissolved oxygen – 5.6 mg/L to above 100% saturation (7.5 mg/L), pH – 6.9 to 8.0, salinity – 32, temperature – 20 to 22 C. Mean measured TOC levels in the control and 1,000 mg/L WSF test level were 2.7 mg/L (range 1.2 to 6.0) and 4.5 mg/L (range 3.0 to 5.6), respectively Test Levels: Control & 10,000 mg/L WSF loading rate. Test Findings: No mortality or signs of toxicity were noted in the 10,000 WSF test level and the control throughout the entire test. Calculation of LL_{50} s: Statistical analysis of survival data not warranted. Test Substance: No undissolved test material was seen on the surface of the test vessels during the entire aquatic toxicity test. Reference Substance: Sodium lauryl sulfate (SLS). The 96-h LC_{50} was 1.2 mg/L. No information provided on method of calculation.
Results	Nominal concentrations: 96-h LL_{50} >10,000 mg/L. 96-h LL_0 = 10,000 mg/L (no mortality or toxic signs noted). Mean measured TOC in the 10,000 mg/L WSF test level was 4.5 mg/L compared to 2.7 mg/L in the control.
Remarks	Measured concentration: n/a Unit: mg/L LC50, LC0, LL50 or LL0 at 48, 72, 96 hours: LL_{50} and LL_0 reported as LC_{50} and NOEC, respectively, although test results were based on WSF loading rate. Statistical results: Statistical analysis of survival data not warranted. Other: •

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Conclusions	No mortality or signs of toxicity were noted in the 10,000 WSF test level and the control throughout the entire test.
Data Quality	Reliable without restrictions
References	Chemical Manufacturers Association, HERTG Nicholson, R.B. (1986) Acute toxicity of CMA Test Material Code 525 to Sheepshead Minnow, *Cyprinodon variegatus*. Springborn Bionomics Study #10823-0186-6100-500-525, Report #BW-86-04-2004.
Other	Updated: 12-21-99